DOCUMENT RESUME

ED 246 162 UD 023 685

AUTHOR Fligstein, Neil; Fernandez, Roberto M.
TITLE Educational Transitions of Whites and Mexican Americans.
SPONS AGENCY National Commission for Employment Policy (DOL), Washington, D.C.
PUB DATE Sep 82
NOTE 52p.; Also contained in UD 023 679.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Comparative Analysis; Cultural Differences; *Educational Attainment; *Family Characteristics; Higher Education; *High School Graduates; *Institutional Characteristics; *Mexican Americans; Models; Secondary Education; *Whites
IDENTIFIERS National Longitudinal Survey Youth Labor Market Ex

ABSTRACT

Using a model of educational attainment modified to take the Mexican-American experience into account, data from the 1979 National Longitudinal Study were analyzed in an attempt to identify factors important to high school graduation for Mexican-Americans and Whites. Findings show that, among Whites, the general factor of family background--especially parental education--appears to be the major determinant of educational attainment. Also, those White students with foreign-born fathers finish high school more frequently and those with either parent foreign born enter college more frequently. Positive school effects in this group include higher teacher-student ratios and private school attendance, with the latter affecting college attendance as well as high school completion. On the negative side, Whites stay in school a shorter time and finish high school less often when Blacks and Hispanics are present. For Mexican Americans, general family background factors are also important: large family size and low parental education are related to poor school attendance and to delay, while mother's education significantly increases the likelihood of high school completion. The foreign-born are less likely to be in school and more likely to be delayed. However, having a foreign-born mother has a positive effect on educational attainment among Mexican American youth. No patterns emerge from school and social environment measures. (CMG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED246162

Educational Transitions of Whites and Mexican Americans

Neil Fligstein
Department of Sociology
University of Arizona
National Opinion Research Center

Roberto M. Fernandez
Department of Sociology
University of Chicago

This work was partially supported by a contract from the National Commission on Employment Policy. We would like to acknowledge the comments of Glen Cain, Carol Jusenius, Alejandro Portes, and Marta Tienda. Any opinions expressed are those of the authors and do not reflect the position of the Commission.

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Patricia H. McNeill
Natl. Comm. for Empl. Policy
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

UD023685

Educational Transitions of Whites and Mexican Americans

INTRODUCTION

It is well known that Mexican Americans attain lower levels of education than whites in American society (U.S. Commission on Civil Rights, 1978; U.S. Bureau of the Census, 1979; National Center for Education Statistics, 1980). The reasons for this are the subject of much speculation and surprisingly little research. This paper aims to provide evidence for the various factors that might explain the disparities between white and Mexican-American educational attainment.

In order to understand how and why Mexican Americans achieve a lower educational level than whites, it is necessary to consider a variety of elements, some of which are unique to the situation of Mexican Americans in the United States, and others of which reflect the general process of educational attainment in the United States. Toward this end, we first summarize the general model of educational attainment that has developed in sociology. Second, we briefly review the educational history of Mexican Americans. Finally, we construct a model of the process of educational attainment for Mexican Americans and attempt to identify the differences and similarities in that process for Mexican Americans and whites.

THE GENERAL MODEL OF EDUCATIONAL ATTAINMENT

Formal education is often seen as a process intervening between an individual's family of origin and later occupational and economic attain-

ments (Blau and Duncan, 1967; Duncan, Featherman, and Duncan, 1972; Jencks et al., 1972; Featherman and Hauser, 1978). The amount of education an individual receives is thought to be a product of a complex process in which one's background, intelligence, academic performance, and school setting, combined with social-psychological factors such as peer, parental, and teacher encouragement and personal goals in occupation and education, are transformed into educational attainment.

The most important set of factors that affects an individual's educational attainment is the individual's background (Blau and Duncan, 1967; Duncan, Featherman, and Duncan, 1972; Jencks et al., 1972; Featherman and Hauser, 1978; Mare, 1980). It is generally thought that higher-income families, in which parents often have more education and high occupational statuses, tend to support children in educational endeavors, because the parents realize that in order for their children to have the same lifestyle they must obtain an education that prepares them for some career. Persons in less affluent families may place less emphasis on education for their children because the costs of college and higher education relative to the prospective returns on this investment do not justify the expenditure. The four variables usually used to index these background factors are father's education, mother's education, father's occupational status, and parental income. In general, it has been found that all of these variables exert about equal effect on the child's educational attainment (Duncan, Featherman, and Duncan, 1972; Hauser, 1971; Jencks et al., 1972; Sewell and Hauser, 1975; Shea, 1976). This finding suggests that a variety of mechanisms are operating to convert socioeconomic background into educational attainments. Parent's income would

seem to most affect the ability of parents to pay for their children's education and related expenses, while parent's education appears to tap the value that parents place on education for their children. Father's occupational status is also an indication of the value placed on education insofar as professional occupations, which usually require much training, tend to have high status, and blue collar occupations, which require less formal training, have lower status.

Sewell and his associates have tried to clarify more precisely how various social-psychological processes intervene between background and educational attainment (Sewell, Haller, and Strauss, 1957; Sewell and Shah, 1968; Sewell, Haller, and Portes, 1969; Sewell and Hauser, 1975). Their work has tried to assess how the advantages of background are translated through social-psychological mechanisms into effects on eventual educational attainment. The basic theoretical notion is that an individual's educational attainment will be influenced by relations to other people. Certain of these people will assume differential significance in children's lives and help shape the educational goals the child holds. Three groups have been deemed relevant to this process: parents, peers, and teachers. It has been found that parents and peers are the most important "significant others," followed by teachers. Hauser (1971) and Otto and Haller (1979) conclude that the major mechanism by which background is translated into educational achievement is the parents' attitude about what the child's educational goals should be.

Two other variables that help explain educational achievement are intelligence (or perhaps more accurately, scholastic ability) and academic performance (Hauser, 1971; Jencks et al., 1972; Sewell and Hauser,

1975). Intelligence measurement, however, is related to background, ethnicity, and language in a problematic fashion. High intelligence is more likely to be measured in students who share middle-class backgrounds and values than in those from different ethnic groups that hold nonstandard values, perhaps speak another language,[1] and have different cultural experiences (Cordasco, 1978; Aguirre, 1979).

The school itself is thought to aid educational attainment in a number of ways. For instance, class size, facilities, and teacher's motivation are obvious factors that could affect educational attainment. However, after years of trying to show school effects net of student background and neighborhood factors, most students of the matter have concluded that there has been very little independent impact of schools (Coleman et al., 1966; Hauser, 1971; Jencks et al., 1972; Jencks and Brown, 1975; Hauser, Sewell, and Alwin, 1976). In looking at blacks, research on high school contextual effects (Armor, 1972; Thornton and Eckland, 1980) and school desegregation (Wilson, 1979; Patchen, Hoffman, and Brown, 1980) has been more successful. For Chicanos, there is also evidence suggesting that school-level variables have an independent effect on scholastic performance. Carter and Segura (1979) stress the role of self-fulfilling prophecies due to teacher expectations—that is, since teachers assume that Mexican Americans are poor students, they behave in a manner that hinders a student's ability to achieve.

The last factor considered important in the educational attainment process is an individual's educational and occupational aspirations. Indeed, Sewell, Haller, and Portes (1969) report that the best predictor of completed schooling is the student's educational aspirations (but see

Alexander and Cook, 1979, for a different view). Occupational aspirations also determine education, as one's career plans may require a degree. Both educational and occupational aspirations are in turn determined to a large extent by background, expectations of significant others, intelligence, academic performance, and the school environment.

In sum, the research in sociology on educational attainment has clearly demonstrated that social background affects educational outcomes mainly through the transmission of values and attitudes toward education. Parents provide economic, psychic, and emotional support for their children that is translated into educational achievement. Schools appear to selectively reinforce those students who have this kind of motivation and allow them to succeed. Through this kind of complex social-psychological process, student aspirations for education and occupations are shaped, and their behavior follows accordingly. The other important pattern to note is that students with higher measured intelligence tend to have higher educational attainment, as do those with higher grades. Academic performance itself is a function of background and values as well as intelligence. Both intelligence and grades are also related to background in that some components of these factors originate in the advantages of growing up in a middle-class environment (Duncan, Featherman, and Duncan, 1972; Sewell and Hauser, 1975).

THE UNIQUE SITUATION OF MEXICAN AMERICANS

Mexican Americans have had a history of discrimination in schools (see Carter and Segura, 1979). When the Spanish conquered Mexico, one of

the first institutions they destroyed was the indigenous native school (Carter, 1970; Weinberg, 1977a, 1977b; Carter and Segura, 1979). The Spanish set up schools to teach the use of Spanish at the exclusion of the Indian languages. In 1821, Mexico won its independence from Spain. Universal education was part of the Mexican constitution, but was never implemented in any systematic fashion. The major source of education was the Catholic Church. Even so, most of those who received any formal schooling were of Spanish descent.

From 1846 to 1848, Mexico and the United States fought a war over the territories that now constitute the southwestern United States. Following the war, many Mexicans chose to stay on their lands and remain in the United States. Weinberg (1977a) estimates that at the time there were 200,000 Mexicans living in Texas, Arizona, New Mexico, and California. The Mexican Americans who remained were, for the most part, treated as a source of cheap labor, and the Americans who moved into the Southwest generally kept power, both political and economic, to themselves. While we today think of Mexican Americans as immigrants or non-English-speaking foreigners, the truth is that their presence in the Southwest predates U.S. control of the area.

From 1848 to the early part of the twentieth century, Mexican immigration to the United States was rather slow. It began to increase from 1909 on, and has fluctuated in a pattern similar to immigration in general since then (Grebler, Moore, and Guzman, 1970). After World War II, Mexican immigration increased. The <u>bracero</u> program brought many Mexicans to the United States as temporary farm laborers (Meier and Rivera, 1972). Since the end of that program in 1964, Mexican migration

has continued at a high level. Most Mexican migrants are unskilled laborers who come to the United States and take low-paying jobs. The Mexican population in the United States tends to be concentrated in low-paying jobs, lives in cities (mostly in barrios), and uses Spanish as the main language (Jaffe, Cullen, and Boswell, 1980).

Most who have written on the issue have stressed that Mexican-American students have been systematically discriminated against in the schools (see Weinberg, 1977a, 1977b, for an overview). Legally, Mexican Americans were not subject to discriminatory racial laws as were blacks. In practice, however, Mexican-American students have attended segregated schools; often their educational facilities are understaffed and lack such basic resources as libraries (Weinberg, 1977a; Carter and Segura, 1979). Most studies (Carter, 1970; Vasquez, 1974; Carter and Segura, 1979) see student underachievement and alienation as a direct consequence of the inferiority of the school setting for Mexicans.

The basic mechanism by which schools have intentionally or unintentionally reduced the likelihood that Mexican-American students will complete high school has been school delay—repeating a particular grade. By compelling students to repeat grades, schools have made alternatives to schooling more attractive to Chicanos (Carter and Segura, 1979; supported by statistics in U.S. Bureau of the Census, 1979). Carter and Segura see this process as one in which the student is pushed out, because he or she faces a difficult school situation and is expected to fail. The other part of this process is that as school becomes less attractive, job opportunities become more attractive. Hence, students may also be pulled out of school by the opportunity for a job (Duncan, 1965; Edwards, 1976).[2]

A remaining issue is the effect of cultural differences on educational attainment of Mexican Americans. The key argument usually put forward is that Mexican-American culture contains different values that are not conducive to educational attainment. This point of view has both a positive and a negative connotation. Some have argued that the Mexican-American child is culturally deprived, has little intellectual stimulation, is not taught to value education, and has a bad self-image (Bloom, Davis, and Hess, 1965; Gordon and Wilkerson, 1966; Heller, 1966). Mexican-American culture has been characterized as family-centered, patriarchal, and oriented toward the extended family. The primary cultural values are thought to be machismo, fatalism, and orientation toward the present. Educators have tended to view Mexican-American students as victims of this culture, and their low educational achievement is thought to reflect these values and orientations. Most empirical evidence does not, however, support this view of the Mexican family (see, for example, Coleman et al., 1966). Further, there is no evidence that Mexican students have a lower self-image than white students (DeBlassie and Healy, 1970).

A more benign point of view has been expressed by Ramirez and Castaneda (1974), who argue that each culture possesses distinct cognitive styles by which it relates to and organizes the world. Mexican Americans are what they call "bicultural" and have a "cognitive style" that they refer to as "field dependent." The term bicultural indicates that Mexican Americans have had to adjust to two cultures and therefore have learned to express themselves in the cognitive styles of both their own culture and the dominant white culture. Cognitive style refers to

learning, human relation, and communication styles. The dominant value-clusters within Mexican-American culture, according to Ramirez and Castaneda, center around family, community, and ethnic group, and center on interpersonal relations, status and role definition in family and community, and Mexican Catholic ideology. These differing cognitive styles result in different learning styles: Mexican-American children learn better in cooperatve rather than competitive settings. They are also more other-oriented in general, and rely more heavily on family, community, and friends for self-perception. The term field dependence implies that Mexican-American children do better in verbal tasks and in tasks that relate to other people, whereas white children do better on analytic tasks.

The argument of Ramirez and Castaneda suggests that the cultural differences between Mexican Americans and whites reflect different values concerning what is important in relations with other people. They do not see Mexican-American children as culturally deprived; rather, they have a different culture containing its own set of rules and justifications whose practices are antithetical to the dominant, white middle-class culture. Schools thus become the site of the destruction of Mexican-American culture.

These cultural differences, combined with the schools' perception and treatment of Mexican-American students, go far toward explaining the low educational attainment of Mexican Americans. Given a hostile school environment and the need to work to help support a household (either one's biological family or one's own children), it is not surprising that Mexican Americans leave school at an early age (Haro, 1977; Laosa, 1977).

Two other issues arise in discussion of Mexican-American scholastic performance: length of residence in the United States, and language. Some studies have found that immigrants tend to be a highly motivated, self-selected group, and therefore show higher achievement, perhaps after an initial disadvantage due to language and customs (Blau and Duncan, 1967; Chiswick, 1978). Fernandez (1982) and Nielsen and Fernandez (1981) speculate that this high level of motivation may be passed on to the immigrants' children, thus explaining why the children of more recent migrants achieve better in high school. Kimball (1968) and Baral (1979) suggest that long-time residents may become "ghettoized" and therefore achieve poorly compared to more recent migrants. Others (e.g., Featherman and Hauser, 1978, Chap. 8), however, find that immigrants are at a socioeconomic disadvantage which these researchers attribute to difficulties of language and culture. In addition, it has been shown with 1970 Census data that immigrants have lower levels of education (Jaffe, Cullen, and Boswell, 1980) which can, through the general mechanisms described above, result in lower educational achievement for the child.

With regard to language, past research has found that Spanish speakers in a predominantly English-speaking society experience difficulties in school and work owing to language (Garcia, 1980; Tienda, 1982). Other studies have found that bilingualism is an asset, both in school (Peal and Lambert, 1962; Fernandez, 1982; for reviews see also Lambert, 1975; Cummins, 1977, 1981) and in certain job markets (Lopez, 1976). The institutional response for both of these positions has been some form of bilingual education. Many members of the Mexican-American community favor bilingual-bicultural programs that are oriented toward

the maintenance of both the English and the Spanish language. Others, with more assimilationist views, emphasize the importance of English proficiency over and above the use of Spanish; they support transitional bilingual programs that are designed to teach English to the Mexican-American child with little regard for maintaining the Spanish tongue. Given these conflicting goals, it is not surprising that there is little agreement about the effectiveness of the different programs that have been implemented (see Fligstein and Fernandez, 1982, for a review of bilingual education programs).

MODELS OF THE EDUCATIONAL ATTAINMENT PROCESS FOR MEXICAN AMERICANS

It is now appropriate to propose a model of educational attainment in general and to describe how such a model would be modified to take into account the special situations of Mexican Americans. There are really two parts to these models: variables that have been found to pertain to all subpopulations, and variables that, in light of the above discussion, can be expected to affect Mexican Americans disproportionately. The background characteristics common to all groups include father's education, mother's education, father's occupation, family income, and number of siblings. Parental education and father's occupation index both the socioeconomic status of the family and parents' attitudes about the desirability of education, while family income measures the ability of the family to pay for education. Number of siblings indicates how many children must share the family income. Controlling other factors, the larger the family, the more likely that the respondent will be drawn out

of school and into the labor force to help support the family (see Rumberger, 1981, for a similar argument). We also include a measure for gender, since past research has shown that men and women vary in educational attainment (Alexander and Eckland, 1974). The social-psychological measures of the educational aspirations and expectations of parent, peer, teacher, and respondent would also be expected to affect educational outcomes.

From the review of the experiences of Mexican Americans, two additional types of background variables need to be included--migration history and linguistic practices. In both cases, past research (described above) has shown mixed results concerning educational attainment. Much of the discrepancy in these findings may be due to the varying conceptions and measures of migration recency and linguistic practice employed by the different studies. Though we cannot resolve the issue here, we note that it is important to incorporate measures of migration and language into models of educational attainment for Mexican Americans.

We next suggest a set of school-level variables as predictors of educational transitions. These include whether or not the school is public or private, the racial and ethnic composition of the school, and such measures of school quality as the dropout rate and the teacher-student ratio. Recently, Coleman, Kilgore, and Hoffer (1981) have endeavored to show that minorities in private schools tend to achieve better than those in public schools (but see Lewis and Wanner, 1979, for contrary evidence). Measures of school racial composition (percentage black and percentage Hispanic) are included in our model because past

research on school integration has shown that it has small but positive effects on scholastic achievement for blacks (U.S. Commission on Civil Rights, 1967; Lewis and St. John, 1974; Wilson, 1979). Though we know of no similar research concerning Mexican Americans, owing to the obvious importance of segregation issues for Hispanics (see Naboa, 1980), we test whether similar effects can be discerned with our data by including percentage Hispanic within the school in our model. As a general measure of the holding power of the respondent's high school, we include the percentage who drop out as a predictor of these educational transitions. Last, in accord with the extensive literature on school effects (e.g., Coleman et al., 1966; Bidwell and Kasarda, 1975; for a review see Spady, 1976), we use the number of students per teacher in the respondent's high school as a measure of school resources.

In addition to these general school variables which should affect both non-Hispanic whites and Mexican Americans, we are interested in curriculum measures that should be important for Mexican Americans, i.e., whether the student was enrolled in a program of English as a Second Language or some form of transitional bilingual education program. As was argued above, it is important to assess whether or not these programs aid in increasing educational attainment.

Finally, we consider some community-related variables. The local unemployment rate in the respondent's area of residence can be considered a measure of the "pull" factors in the local labor market which might draw youth out of school (see Duncan, 1965; Edwards, 1976). Another community variable, urban residence, is included because living in a large city would make one less likely to complete school because of the greater number of non-school options available in cities.

ANALYSIS

The data set used in these analyses is the U.S. Department of Labor's National Longitudinal Survey (NLS) of 1979. The choice of data set presented problems. The ideal data for this project must include information on ethnicity, migration history, family background, language, education, schools and curriculum, educational aspirations and expectations, IQ, grades, and must be longitudinal. No data set exists that covers all of these elements. The NLS data, while limited in age range and lacking certain variables, proved to contain the greatest amount of relevant information.[3]

The data analysis strategy requires defining relevant subpopulations and dependent variables. Since the sample members are quite young, many of the respondents are still in school. We therefore divided the data into three groups: those aged less than or equal to 18 years of age, those aged 19-22, and those who had completed high school. The first sample is used to determine which factors are related to the respondent's being in school or having dropped out. The dependent variable is a dummy variable coded "zero" if the respondent dropped out and "one" if the respondent was still in school.[4] The second sample is used to determine what factors affect high school completion. The dependent variable here is coded "zero" if the respondent did not finish high school and "one" if the respondent did. The third sample, composed of those who had completed high school, is used because we are interested in what affects a person's chances of going to college. Since high school graduation is a prerequisite for entrance to colleges and universities, we decided to

restrict our attention to the sample of interest, i.e., high school graduates. The dependent variable is coded "zero" if the respondent did not go to college and "one" if the respondent did.

We divided the sample in this manner for the following reasons. If we had used completed years of schooling as a dependent variable for these young people, we would have encountered the limitation that many of our respondents had not completed schooling. It makes more sense to consider school transitions, such as staying in school, completing high school, and entering college. Unfortunately, age is also going to play a role in the schooling process; if we were to consider using only those who had dropped out of high school or who had completed high school, we would truncate our sample by excluding those still in school.[5] By breaking the samples down into age groups, we eliminate this problem. The first sample answers the question, "Given that respondents are younger than 18, what are the causes of their dropping out of school versus their being in school?" The second sample assesses the determinants of high school completion among those who are old enough to be eligible to complete high school.

One other dependent variable is used in the two high school samples: school delay. It was argued earlier that school delay was a major factor in keeping Mexican-American students from completing high school. Since delay and dropping out could be seen as simultaneous events, it might not be reasonable to include delay as an independent variable (although this reasoning may be incorrect, since the sequence usually is that being held back is followed by dropping out, whereas the delay could easily be seen as <u>preceding</u> dropping out). However, it is sensible to examine the determinants of delay. School delay is defined as the (median age in the

population in the highest grade the respondent completed) - (the age of the respondent at the highest grade completed).

Two ethnic groups are analyzed separately here: whites and Mexican Americans. (Hispanic groups other than Mexican Americans were too few to be included.) We assigned respondents to these ethnic groups on the basis of self-identification. Smith (1980) shows that among various methods that have been used to classify respondents into ethnic groups in surveys, self-identification is the most efficient technique.

Two techniques were employed in the data analysis: ordinary least squares (OLS) regression and logistic regression. The OLS regression is used when school delay, a continuous measure, is the dependent variable. Since the transition variables are dichotomous, OLS regressions would result in estimates that are no longer minimum-variance unbiased, because of heteroskedasticity. A logit specification provides an adequate solution to this problem (Theil, 1971, pp. 631-633).

Explanatory Variables

The independent variables are entered into the analyses in two sets: family background, and school and social environment variables.[6] In our theoretical discussion, we suggested variables relevant to the general population and variables relevant to Mexican Americans. Here, we incorporate both types of measures into the two sets of variables.

Nine measures of family background are included in the model: (1) father's and (2) mother's education in years of schooling; (3) a dummy variable coded zero if the respondent was female and one if the respondent was male; three dummy variables coded zero if (4) the respondent,

(5) the mother, and (6) the father were born in the United States, coded one if born elsewhere; (7) a dummy variable coded zero if the interview was conducted in English and coded one if the interview was conducted in Spanish; (8) a dummy variable coded one if the respondent has a non-English mother tongue and zero otherwise; and (9) the number of siblings in the respondent's family. No measures of family income and father's occupation were included because of high levels of missing data (over 40%).

The school and social environment measures reflect characteristics of the surrounding area. The local community is indexed by two measures: the local unemployment rate in 1979, and a dummy variable coded one if the respondent was living in a Standard Metropolitan Statistical Area and coded zero if not.

The school variables are of two types: school environment and curriculum. The first measures tap the quality of the education and the racial/ethnic composition of the school. Only one of the school variables has relatively high nonmissing data. This is a dummy variable coded zero if the respondent attended a public school and coded one for a private school. The other school variables were not assessed for about half of the sample. In order to use the data available, we constructed a dummy variable called "nonresponse school items" that is coded zero if the respondent does not have school data and one if data exists. All variables utilizing the school data are coded zero for those individuals for whom the school data are missing. If those who responded are not systematically more likely to have stayed in school, completed school, or entered college, then this dummy variable should not affect the outcome

Mexican Americans. The dependent variables include dropping out or staying in high school, completing high school, entering college, and school delay. The strategy is first to enter background variables, and next school and community variables. In this way, we should begin to understand the schooling process for the two groups and the way in which they differ and are similar.

Descriptive Statistics

Table 1 presents means and standard deviations for the subpopulations by ethnic group. Considering the high school populations, we see that Mexican Americans are less likely to be in school or to have graduated from high school. Most striking is that only 57% of Mexican Americans over 18 years of age have graduated from high school, as compared to 83% of whites. However, when we consider the population of high school graduates, we find that Mexican Americans attend college at a higher rate than whites (66% vs. 58%), despite their generally lower socioeconomic background (see below). The Mexican Americans who finish high school appear to be a motivated group who have pursued the educational process and go on to college at a somewhat higher rate than whites.[7] This suggests that the primary barriers to Mexican-American school achievement are encountered early in the educational life course—i.e., before and during high school.[8] Another indication of this is that Mexican Americans are about half a year older in a grade than whites (see the means for school delay).

The background variables show that Mexican Americans come from lower-status backgrounds: their parents have much less education than do

Table 1

Means and Standard Deviations for Whites and Mexican Americans in the Three Sample Populations

Variable	White						Mexican American					
	< 18 Years		> 18 Years		HS Grad		< 18 Years		> 18 Years		HS Grad	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
% in high school	.90	.30					.83	.38				
% high school grad			.83	.37					.58	.49		
% enter college					.58	.49					.66	.48
School delay	.50	.72	.68	1.01			.91	1.00	1.11	1.32		
Father's education	11.73	3.45	12.03	3.60	12.55	3.43	7.29	4.60	6.90	4.67	8.02	4.56
Mother's education	11.58	2.56	11.89	2.62	12.28	2.45	7.07	3.99	6.96	4.31	8.17	4.21
Sex	.50	.50	.46	.50	.46	.50	.47	.50	.48	.50	.47	.50
Number siblings	3.20	2.17	3.22	2.08	3.04	1.92	4.96	2.76	5.16	2.92	4.36	2.37
Nativity	.04	.19	.03	.17	.03	.17	.25	.43	.28	.45	.13	.34
Father's nativity	.05	.22	.05	.22	.05	.22	.41	.49	.45	.50	.36	.48
Mother's nativity	.06	.24	.05	.22	.05	.22	.45	.50	.47	.50	.39	.49
Language as child	.11	.31	.13	.34	.13	.34	.93	.26	.94	.23	.93	.25
Spanish interview	.02	.14	.02	.13	.02	.13	.05	.21	.07	.25	.03	.18
SMSA	.64	.48	.68	.47	.69	.46	.71	.46	.80	.40	.80	.40
Unemployment rate	6.34	2.16	6.14	2.18	6.12	2.20	6.64	3.20	5.97	2.71	6.07	2.53
Nonresponse school items	.54	.50	.51	.50	.53	.50	.47	.50	.40	.48	.49	.50
% Hispanic in school	3.18	8.86	2.89	8.53	2.77	7.88	31.82	32.60	28.13	33.87	35.13	35.39
% black in school	6.31	12.77	5.63	11.75	5.68	11.45	4.11	9.71	3.23	9.17	2.84	6.76
% dropout in school	11.04	20.13	8.28	14.72	7.90	13.72	13.16	19.70	9.98	15.33	11.69	15.65
Teacher-student ratio	.04	.02	.04	.03	.04	.03	.03	.03	.03	.03	.04	.03
Public-private	.06	.24	.08	.27	.09	.29	.04	.19	.03	.18	.04	.19
Nonresponse transcript	.70	.46	.66	.47	.69	.46	.58	.49	.44	.50	.53	.50
ESL course	.002	.05	.00	.05	.00	.04	.04	.19	.03	.16	.02	.15
Bilingual education	.02	.13	.02	.15	.02	.15	.07	.26	.05	.22	.06	.24
N	(3,465)		(2,280)		(1,871)		(587)		(296)		(173)	

Source: National Longitudinal Survey of Youth, 1979.

to a statistically significant degree. From our discussions with the people who collected the data, there is no reason to believe that such bias exists. The four measures of school environment are the percentage of students in high school who are Hispanic, the percentage of students who are black, the percentage of students who dropped out of the high school, and the pupil-teacher ratio.

The curriculum data for individuals were collected independently of the rest of the NLS data. Only about 40% of the respondents have these data, which are taken from high school transcripts. A dummy variable called "nonresponse transcript" was created, coded zero if the respondent did not have transcript data and one if the respondent did. Here too, zero is assigned to the missing transcript data. We should thus be able to assess if the presence of the transcript data is systematically related to the outcomes. The two curriculum variables are coded at the individual level; they are dummy variables coded zero if the respondent did not take a course entitled English as a Second Language or Bilingual Education and coded one if the respondent did.

No measures of social-psychological attributes such as educational aspirations and expectations of peer, respondent, or parent are included in these models, for two reasons. First, some of these variables were not measured. Second, some were measured at the time of the interview, and therefore it is difficult to determine whether the attitude caused the relevant educational transition, or vice versa. To use the measures probably requires longitudinal data.

In sum, the analytic strategy is to examine the causes of schooling outcomes for three relevant age cohorts of non-Hispanic whites and

whites; they come from much larger families; and respondent and both parents are much more likely to be foreign-born. The language measures also show large differences: for all three populations, a small percentage of whites (11-13%) spoke a foreign language as a child; the comparable figure for Mexican Americans is over 90%. A small percentage (2%) of respondents who identified themselves as white elected to take the interview in Spanish; among Mexican Americans the range was 3-5%. Since none of those who were interviewed in Spanish spoke English as their mother tongue, we can interpret these two variables as classifying respondents into three language types: Spanish monolinguals (those interviewed in Spanish), bilinguals (interviewed in English and reporting Spanish as the mother tongue), English monolinguals (interviewed in English and reporting English as the mother tongue). Following this interpretation in our sample the Mexican-American population is largely bilingual, with relatively few at either monolingual extreme (see Skrabanek, 1970, and Garcia, 1980, for supporting evidence).

The school and community variables show smaller differences across ethnic groups than do the background variables. Mexican Americans are somewhat more urbanized than whites and tend to go to segregated schools and to schools with relatively high dropout rates. Not surprisingly, in light of their generally lower-status backgrounds, Mexican Americans are less likely to attend private school.

RESULTS FOR THOSE AGED 14-18

There are two dependent variables in these analyses: whether or not the respondent is enrolled in school, and school delay. We will first

consider the determinants of the school enrollment variable for each ethnic group. We will then compare the models across groups. Finally, we will examine the regressions for school delay and compare those results. Tables 2 and 3 present the results.

School Enrollment

For whites in this age group, four of the nine family background measures significantly affect the likelihood of being in school. Both measures of parental education positively affect that likelihood.[9] Those with more siblings are less likely to be in school, which would imply that, other things being equal, respondents from large families are more likely to be drawn out of school in order to help support the family of origin. None of the nativity variables affect the likelihood of being in school, but respondents who were interviewed in Spanish are more likely to be out of school.[10] Two of the measures of school and social environment are significantly related to enrollment in school. One of these, whether or not the individual has a transcript, is of no theoretical interest; as expected, students with transcript are more likely to be in school. The finding that whites from schools with a high percentage of blacks are less likely to be in school could reflect a number of factors --a poorer neighborhood, a more dangerous school setting, or a poorer quality educational system. However, there are no effects from local economic conditions, nor from other school or curriculum measures.

Looking at the results for Mexican Americans in Table 2, in the model containing only background variables we see that neither measure of parental education affects the likelihood of being in school. As is the case for whites, respondents with a greater number of siblings are less

Table 2

Logit and OLS Regression Results for High School Attendance
Among Whites and Mexican Americans Aged 18 or Younger

Independent Variable	Dependent Variable: High School Attendance[a]							
	Whites				Mexican Americans			
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b
Father's education	.16**	.02	.15**	.02	.05	.03	.08*	.04
Mother's education	.10**	.03	.10**	.03	.02	.04	.01	.04
Sex	.07	.12	.06	.12	.05	.24	.11	.26
Number of siblings	-.11**	.02	-.11**	.02	-.14**	.04	-.16**	.05
Nativity	-.27	.43	-.17	.44	-1.65**	.38	-1.81**	.42
Father's nativity	.10	.42	.16	.43	-.29	.37	-.32	.39
Mother's nativity	.73	.45	.84	.46	1.24**	.41	1.42**	.43
Language as child	-.05	.23	-.04	.23	.49	.50	.58	.54
Spanish interview	-.80*	.31	-.75*	.32	-1.46**	.45	-1.27*	.52
SMSA			-.07	.13			-1.02**	.34
Unemployment rate			.04	.03			-.04	.04
Nonresponse school items			.14	.16			.75*	.38
% Hispanic in school			-.01	.01			-.01*	.006
% black in school			-.01*	.004			-.04**	.01
% dropout in school			-.004	.003			.02	.01
Teacher-student ratio			3.90	2.92			4.14	8.57
Public-private			.04	.28			.30	.73
Nonresponse transcript			.51**	.15			.69	.35
ESL course			-1.34	.99			1.03	.86
Bilingual education			1.41	.86			.63	.72
Constant	-.27		-.84		1.63		1.95	
R^2								
D	.06		.07		.12		.18	
N			(3,465)				(587)	

Source: National Longitudinal Survey of Youth, 1979.

*Statistically significant at the 5% level.
**Statistically significant at the 1% level.

[a]Results from logistic regression.

likely to be in school. This is evidence that young Mexican Americans may be out of school because their families need additional income. Respondents born in Mexico are also less likely to be in school, although those whose mothers are foreign-born are more likely to be in school.[11] If the interview was conducted in Spanish, the respondent is less likely to be in school. In terms of our discussion above, this might be interpreted as a negative effect of Spanish monolingualism as compared to English monolingualism (the excluded category). The fact that the mother-tongue dummy variable is not significant means that bilinguals are just as likely to be in school as are English monolinguals.

With the addition of the school and social environment variables, three additional effects appear. Respondents who live in an SMSA are less likely to be in school. This variable may function as a proxy for being in a barrio environment, where the community may be drawing students out of school by offering employment (albeit at low wages). In addition, if students face poor employment prospects after high school graduation, there is little incentive for them to remain in school. (See the argument of Stinchcombe, 1964, regarding the effect of future labor market prospects on behavior in school.) Two school-related measures are significant: a large number of both blacks and Hispanics in the school is related to a lower likelihood of being in school. This is probably a reflection of school quality. Neither of the variables measuring whether or not a respondent was enrolled in a Bilingual Education or ESL course has a statistically significant effect on staying in school. This result is not surprising, in light of the fact that these programs are quite heterogeneous[12] (see Fligstein and Fernandez, 1982).

In summary, large families, Spanish-language dominance, foreign birth, urban environment, and lower-quality schools all operate to lessen the likelihood that the Mexican-American student will remain in school.

The major differences between Mexican Americans and whites center on the parental education and nativity variables. Mexican-American students with highly educated or foreign-born mothers are more likely to be enrolled in school, though the respondent's foreign birth is related to not being in school. For whites, both mother's and father's education affect the probability of being in school, while none of the nativity variables affect school attendance. These differences show that being an immigrant lowers Mexican-American school attendance but has no effect for whites. Furthermore, mothers play important roles in the socialization process for Mexican Americans, as indicated by the effects of mother's nativity and education.

School Delay

The equation predicting school delay for whites 18 and under shows results similar to those predicting school enrollment, although some differences are apparent. In the regression analyses, a negative coefficient indicates less delay; a positive coefficient indicates more delay. Education of both parents significantly affects school delay: the more education the parents have, the less delay the student experiences. Male respondents are older in grade on average, as are respondents from large families. For whites, being born in a foreign country increases the probability of being older in grade.

Table 3

Logit and OLS Regression Results for School Delay Among Whites and Mexican Americans Aged 18 or Younger

Independent Variable	Dependent Variable: School Delay[a]							
	Whites				Mexican Americans			
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b
Father's education	-.02**	.004	-.01**	.004	-.02	.01	-.02	.01
Mother's education	-.04**	.006	-.033**	.006	-.02	.01	-.01	.01
Sex	.19**	.02	.18**	.02	.17*	.08	.16*	.07
Number of siblings	.03**	.006	.03**	.006	.06**	.015	.06**	.02
Nativity	.18*	.08	.17*	.08	.66**	.11	.69**	.11
Father's nativity	-.06	.07	-.05	.07	.04	.11	.04	.11
Mother's nativity	.02	.07	.02	.07	-.23*	.10	-.19	.11
Language as child	.04	.05	.04	.05	.13	.15	.13	.15
Spanish interview	.15	.08	.13	.08	.23	.19	.23	.19
SMSA			-.06*	.03			-.26**	.09
Unemployment rate			-.006	.006			-.06**	.01
Nonresponse school items			.009	.03			.03	.10
% Hispanic in school			-.001	.001			.000	.001
% black in school			.000	.001			.002	.004
% dropout in school			.002**	.001			-.002	.002
Teacher-student ratio			-1.31*	.54			-.15	2.20
Public-private			-.02	.05			-.42*	.19
Nonresponse transcript			-.05	.03			-.20	.10
ESL course			.28	.22			-.34	.23
Bilingual education			-.14	.10			.21	.17
Constant	.89		.98		.62		1.25	
R^2	.07		.08		.20		.26	
D								
N			(3,439)				(580)	

Source: National Longitudinal Survey of Youth, 1979.

*Statistically significant at the 5% level.
**Statistically significant at the 1% level.

[a]Results from OLS regression.

When the school and social environment variables are added, three additional effects appear. Respondents in SMSAs are less delayed, implying that rural schools hold students back more frequently. Two interesting school effects clearly reflect school quality and school strategy. A respondent in a school with a high dropout rate is more likely to be older in grade, which could indicate that those schools use grade retention more frequently and therefore have more discouraged students, who later drop out. There is also a statistically significant effect of the teacher-student ratio; students who attend schools with more teachers per student tend to be less grade-delayed; presumably, this reflects the fact that teachers are able to spend more time with students individually and students are therefore less likely to fail.

The school-delay regression for Mexican Americans is also similar to the one predicting school enrollment. Those in large families and those of foreign birth are older in grade. Those whose mothers are foreign-born are less likely to be grade-delayed. Variables related to mothers exert effects throughout the Mexican-American equations: mother's education and mother's nativity are strong determinants of children's educational attainment. One difference between the model for school attendance and the model for delay is apparent: young men are more likely than young women to experience school delay.

Among the school and social environment variables, three effects are statistically significant. Respondents who live in an SMSA are less likely to experience school delay. A high unemployment rate is related to less school delay, implying that Mexican-American students may be trading off schooling for work, leaving school when work is available.

Mexican Americans in private schools are less delayed than those in public schools. Whether this is due to self-selection of better students into private schools or to differences in school policies cannot be determined here.

Three conclusions are evident. First, parental education tends to lower school delay for whites, but has little effect for Mexican Americans. This suggests that school delay for Mexican Americans is not directly related to socioeconomic background; it may instead reflect other influences—perhaps the school policies emphasized by Carter and Segura (1979). Second, non-U.S. origin is strongly related to delay for Mexican Americans; being foreign-born increases school delay for Mexican Americans by almost half a year. Finally, among Mexican Americans, foreign-born mothers have children who are less delayed in their progress through school. This is consistent with the results for school attendance that show mothers to be important in the educational process of Mexican Americans.

RESULTS FOR THOSE AGED 19-22

Tables 4 and 5 present models of high school completion and school delay for the older age group.

High School Completion

In the equation containing only the background variables, for whites we find that the largest effects are those of parental education. This result accords with the literature reviewed above indicating that parents' education is a key determinant of children's education. Young

Table 4

Logit and OLS Regression Results for High School Completion
Among Whites and Mexican Americans Aged 19-22

Independent Variable	Dependent Variable: High School Completion[a]							
	Whites				Mexican Americans			
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b
Father's education	.15**	.02	.14**	.02	.03	.04	.02	.04
Mother's education	.24**	.03	.23**	.03	.10*	.04	.12*	.05
Sex	-.34**	.12	-.37**	.13	-.02	.27	-.05	.29
Number of siblings	-.14**	.03	-.13**	.03	-.13**	.05	-.15**	.06
Nativity	.38	.48	.47	.51	-1.75	.42	-1.51**	.47
Father's nativity	1.54**	.47	1.54**	.49	.16	.40	.00	.43
Mother's nativity	-.33	.39	-.16	.41	.57	.41	.41	.43
Language as child	.13	.22	.11	.22	.42	.60	.40	.63
Spanish interview	-.63	.39	-.67	.40	-.23	.60	.36	.68
SMSA			.07	.14			.48	.39
Unemployment rate			.02	.03			.04	.06
Nonresponse school items			.21	.16			.34	.41
% Hispanic in school			-.02*	.006			.014*	.006
% black in school			-.001	.005			-.02	.02
% dropout in school			.01**	.004			.002	.01
Teacher-student ratio			9.67**	2.91			-7.17	9.21
Public-private			1.94**	.53			.16	.88
Nonresponse transcript			.30	.16			.69	.39
ESL course			-1.37	1.27			.06	.93
Bilingual education			.75	.74			1.28	.84
Constant	-2.17		-2.69		-.06		-1.25	
R^2								
D	.13		.15		.20		.26	
N			(2,280)				(296)	

Source: National Longitudinal Survey of Youth, 1979.

*Statistically significant at the 5% level.
**Statistically significant at the 1% level.

[a]Results from logistic regression.

Table 5

Logit and OLS Regression Results for School Delay Among Whites and Mexican Americans Aged 19-22

Independent Variable	Dependent Variable: School Delay[a]							
	Whites				Mexican Americans			
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b
Father's education	-.01*	.007	-.01	.007	-.03	.02	-.02	.02
Mother's education	-.04**	.01	-.04**	.01	.008	.02	.008	.024
Sex	.24**	.04	.24**	.04	.35*	.15	.35*	.15
Number of siblings	.04**	.01	.04**	.01	.10**	.03	.10**	.03
Nativity	.05	.15	.05	.15	.53*	.22	.46	.24
Father's nativity	-.19	.13	-.18	.13	.13	.22	.19	.23
Mother's nativity	.20	.13	.17	.13	-.23	.21	-.11	.22
Language as child	-.04	.07	-.06	.07	.01	.32	-.02	.33
Spanish interview	.39*	.16	.37*	.16	.55	.30	.44	.32
SMSA			-.01	.05			-.33	.20
Unemployment rate			-.01	.01			-.02	.03
Nonresponse school items			-.09	.05			.19	.21
% Hispanic in school			.007**	.002			-.002	.003
% black in school			.001	.001			-.001	.009
% dropout in school			.001	.001			-.005	.006
Teacher-student ratio			-.03	.82			1.55	4.86
Public-private			-.01	.08			-.33	.42
Nonresponse transcript			.05	.05			-.26	.20
ESL course			.28	.46			.44	.50
Bilingual education			-.11	.15			-.38	.38
Constant	1.06		1.16		.41		.85	
R^2	.04		.05		.17		.20	
N			(2,239)				(287)	

Source: National Longitudinal Survey of Youth, 1979.

*Statistically significant at the 5% level.
**Statistically significant at the 1% level.

[a]Results from OLS regression.

men are less likely to complete high school than young women, which could reflect their greater opportunities in the labor market. Respondents from larger families (measured by number of siblings) are also less likely to finish high school, suggesting the importance of family obligations on school continuation decisions. Four of the school variables bear a statistically significant relation to finishing high school. Respondents in schools with a high percentage of Hispanics or schools with high dropout rates tend to finish high school less often; this could reflect school quality, social environment, or a number of other factors. A higher teacher-student ratio positively affects the probability of high school completion. Finally, controlling other factors, attending a private school significantly increases one's chances of high school completion. Our data do not permit us to determine whether this is due to selection into private schools of students who are less likely to drop out or to aspects of the school environment that encourage high achievement.

In the results for Mexican Americans, we see from the equation with only the background variables that mother's education significantly increases the likelihood of high school completion, whereas father's education does not. As we have noted above, this suggests that Mexican-American mothers play a key role in their children's educational outcomes. The more siblings a respondent has, the less likely he or she is to complete school. Finally, persons of foreign birth finish high school less frequently. Neither of the language measures affects high school completion—i.e., English monolinguals are no more likely to finish high school than either bilinguals or Spanish monolinguals. When

the school and social environment variables are added, only the percentage of Hispanics in the school affects high school completion to a statistically significant degree. Mexican Americans in Hispanic schools tend to complete high school more frequently. This could imply that a Mexican-American student culture aids high school completion.

When we compare whites and Mexican Americans, we find that in general the background variables are more powerful predictors of high school completion for whites. Both parents' education strongly affects high school completion for whites, while only the mother's education does so for Mexican Americans. White males are much less likely to complete high school than white females, while Mexican-American females and males are equally likely to do so. Being in a Hispanic high school aids school completion for Mexican Americans and deters it for whites. Also, foreign-born Mexican Americans are much less likely to finish high school than are whites of foreign birth. Taken together, these results show that for whites, high school completion is highly related to parental education and the respondent's sex, while for Mexican Americans high school completion is determined mostly by their mother's education and their own nativity.

School Delay

School delay for those whites who are older than 18 has determinants similar to those of high school completion. In the equation with only background characteristics, parental education is associated with less school delay, while males are more likely to be delayed than females. Respondents from large families also experience more school delay. There

is one anomalous result in this table, concerning those whites who were interviewed in Spanish: they are more likely to have been delayed in their progress through school. Only 2% of the white sample was in this category; this coefficient should therefore be interpreted cautiously. Only one additional effect appears in the equation with the school and social environment variables. Respondents who attended a school with a high percentage of Hispanics were more likely to have experienced grade delay. This could reflect school quality, but it also could be tapping school policy. If the literature on school delay for Hispanics is correct, then schools with Hispanic concentrations may more frequently use grade delay as a policy (see Carter and Segura, 1979).

Only two background variables affect the school delay of Mexican Americans over age 18: sex of respondent, and number of siblings. Respondents who are male or who come from a large family are more likely to have been delayed in schooling. Again, the language variables do not affect school delay. None of the school and social environment or curriculum variables have statistically significant effects on high school completion.

Here too, the most interesting difference between groups is that parental education is highly related to school delay for whites, and less so for Mexican Americans. The lower mean and greater variance of Mexican-American parental educational attainment is perhaps one reason that there is no relationship between delay and parental educational attainment. The school policies that have been alleged to be the major cause of Chicano school delay (Carter and Segura, 1979) might be another reason. The much smaller R^2s for delay among whites in both age populations indicate that being delayed is a much more random process for

whites then it is for Mexican Americans, despite the fact that Chicanos are much more grade-delayed and have much more variance than do whites (see Table 1). Apparently, even without the measures of school policy that Carter and Segura (1979) emphasize, our model is much more efficacious for Mexican Americans than for whites.

RESULTS FOR THOSE WHO WERE HIGH SCHOOL GRADUATES

The final set of equations concerns the determinants of college attendance, given that the respondent finished high school (see Table 6). These models are misspecified insofar as parental income is left out of the equation. Since college costs money, this omission raises problems.[13]

The equation with only the background variables for whites shows that both measures of parental education positively affect the likelihood of college attendance. Respondents from larger families are less likely to attend college. (Note that this variable could proxy for the family's ability to pay for college.) Two interesting effects emerge concerning nativity. If either parent was born in a foreign country, the respondent is more likely to attend college. This may be due to immigrants' high levels of motivation (Chiswick, 1978; Fernandez, 1982; Nielsen and Fernandez, 1981). Only one of the variables concerning school and social environment significantly affects college attendance: if one attends a private school, one is more likely to go to college.

We now turn to the determinants of Mexican-American college attendance for this group of respondents. Only two family background

Table 6

Logit Regression Results for College Attendance by White and Mexican-American High School Graduates

Independent Variable	Whites				Mexican Americans			
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(
Father's education	.19**	.02	.18**	.02	-.05	.05	-.06	.0(
Mother's education	.18**	.03	.17**	.03	.16**	.06	.17**	.0(
Sex	-.02	.10	-.01	.11	-.32	.36	-.49	.3(
Number of siblings	-.12**	.03	-.12**	.03	-.06	.08	-.04	.0(
Nativity	.23	.40	.29	.41	-.96	.62	-.62	.7(
Father's nativity	1.08**	.35	1.05**	.35	.53	.54	.45	.5(
Mother's nativity	.78**	.36	.72**	.36	1.39**	.53	1.27*	.5(
Language as child	.16	.18	.12	.18	-.48	.75	-.58	.7(
Spanish interview	.23	.41	.18	.42	-1.12	.91	-1.23	.9(
SMSA			.18	.12			.78	.4(
Unemployment rate			-.04	.03			.12	.0(
Nonresponse school items			.09	.13			-1.24*	.5(
% Hispanic in school			.014	.007			-.001	.0(
% black in school			.002	.004			-.06	.03
% dropout in school			.00	.004			.03	.02
Teacher-student ratio			.53	2.12			12.65	12.64
Public-private			.97**	.21			.28	1.23
Nonresponse transcript			.11	.13			.13	.46
ESL course			-.32	1.47			-2.66	1.45
Bilingual education			.13	.34			.45	.97
Constant	-3.96		-3.85		.21		-1.06	
D	.16		.17		.12		.19	
N			(1,871)				(173)	

Source: National Longitudinal Survey of Youth, 1979.

*Statistically significant at the 5% level.
**Statistically significant at the 1% level.

variables affect college attendance: mother's education and mother's nativity. Mexican Americans with immigrant mothers are more likely to go to college, while the higher the mother's educational attainment, the more likely the respondent is to attend college. When the measures of school and social environment are added, only the dummy variable for the school data affects with statistical significance the likelihood of college attendance.[14]

The major differences across groups for the college equations center on two factors: the lack of effect of certain variables for Mexican Americans and the importance of those variables for whites, and the fact that mothers appear to be more important for Mexican-American college attendance, whereas both parents are important to whites.

SUMMARY AND CONCLUSION

How do the educational attainment processes of whites and Mexican Americans compare? Among whites, the general factor of family background appears to be the major determinant of educational attainment. In particular, parental education and number of siblings significantly affect staying in school, graduating from high school, and attending college. Parents' education to some degree is replicated in their children. There are also interesting effects concerning parental nativity. Respondents with foreign-born fathers tend to finish high school more frequently, and those with either parent foreign-born enter college more frequently. There also are some school effects on educational attainment of whites. Higher teacher-student ratios affect school delay and high school completion,

while respondents in private schools tend to complete school more frequently and attend college more often. Finally, whites stay in school a shorter time and finish high school less often when blacks and Hispanics are present, effects which are probably due to the generally inferior quality of black and Hispanic schools (Coleman et al., 1966; National Center for Education Statistics, 1980).

For Mexican Americans, general family background factors are also important--family size and parental education, particularly mother's education, are related to school attendance and (negatively) to delay. Among the background variables that we expected could disproportionately affect Mexican Americans--migration history and language type--only migration history is consistently related to high school and college attendance and to delay in high school.[15] Foreign-born respondents are less likely to be in school and more likely to have been delayed. However, having a foreign-born mother seems to have salutary effects on the respondent's educational attainment. This fact, combined with the importance of mother's education, is evidence that mothers play a critical role in Mexican-American socialization.

When we consider the school and social environment variables, no patterns emerge. The curriculum measures show that those students who at some time were enrolled in ESL or Bilingual Education courses perform no differently from those never enrolled in such courses. This result is probably due to two problems in our data: (1) the large numbers of missing values on the curriculum variables; and (2) the coarseness of the measures. We do not know what type of bilingual education program the students were enrolled in, the length of the program, or its quality.

It is clear that high school completion is a major barrier to Chicano school attainment. Those who do graduate from high school go on to college at higher rates than do whites, despite their lower socioeconomic origins. From these analyses, the effects of particular educational policies (as measured by the school and curriculum measures) on the scholastic performance of Mexican Americans are equivocal. Segregation appears to hurt Chicanos, but little else seems to matter. Most important in explaining poor high school attendance by Mexican Americans are the general family background factors of low parental education and large family size. Factors more specific to the Mexican-American experience in the United States--language patterns and migration history--also appear to affect Chicano educational attainments. There is some evidence that Spanish monolingualism is a hindrance to Mexican-American school achievement, and foreign birth appears to have educational costs. However, while it is important to understand the costs that Mexican Americans pay, it should be emphasized that they do not suffer from a simple lack of cultural assimilation, for another fact of Chicano culture appears as a benefit--i.e., mothers who are foreign-born seem to instill higher levels of motivation that lead to better academic achievement.

NOTES

[1]Jensen (1961, 1980) reports results that show that standard IQ tests are not measuring the scholastic ability of Mexican-American children accurately. He concludes that the causes of the inaccuracies revolve around the bilingualism of most Chicanos.

[2]See Nielsen (1980) for a discussion of push-out and pull-out factors as explanations of Hispanic dropout rates.

[3]Two other data sets were considered: the Survey of Income and Education (1976), and High School and Beyond (1980). The Survey of Income and Education cannot be used since it contains no information on family background and school performance. The High School and Beyond study only samples 10th and 12th graders at one point in time, making it impossible to assess why people completed or did not complete relevant school transitions. When subsequent waves of the High School and Beyond survey become available, it will be the best choice for studying these issues. High School and Beyond oversampled Hispanics and contains detailed language data, achievement test performance, and a broad range of background characteristics.

[4]Those students who had completed high school in this age group were coded as being in school.

[5]In essence, this problem can be characterized as a selectivity bias (Heckman, 1979). One could argue that the appropriate econometric solution to this problem is to use a correction for such bias. Unfortunately, in cases where the ultimate dependent variable itself is dichotomous, this correction is not straightforward. It requires use of

a technique known as bivariate probit analysis (Ashford and Snowden, 1970), which is not computationally simple. We therefore chose the alternative strategy of splitting the sample.

[6]The family factors alone produce a reduced form model. This reduced form provides a baseline from which the effect of potential policy variables (school and environment) can be assessed.

[7]See Nielsen (1980) for an elaboration of this selection argument.

[8]This is not to say that there is equality of opportunity for Mexican Americans to attend college. For example, they are much more likely to attend two-year colleges than are whites. For a general discussion concerning the plight of minorities in two-year colleges, see Olivas (1980).

[9]Because mother's and father's educations are highly correlated, multicollinearity could be a problem. In none of our samples is the correlation greater than .46. In analyses not presented here, we investigated the sensitivity of these estimates to the exclusion of one or the other parental education measure. The analyses confirmed that our results are not due to multicollinearity.

[10]Recall that ethnic identity is based on self-report in these data. A small number of respondents who identified themselves as "white" were interviewed in Spanish (see Table 1).

[11]In all the analyses that follow preliminary investigation has shown that the pattern of effects of the nativity variables is not due to multicollinearity.

[12]For two reasons, we chose not to combine these measures into one measure that one might call "additional language training." First, ESL and Bilingual Education programs have quite different goals. Second,

being in an ESL course tends to be negatively associated with school outcomes, while Bilingual Education has positive effects, although both are statistically insignificant. Combining the measures would only introduce greater heterogeneity.

[13]A measure of parental income was included in the NLS, but since 60% of the population has missing data, we excluded the variable from our analysis.

[14]This measure implies that those with school data were less likely to attend college. Obviously, this is not a substantively interesting result.

[15]The fact that language type does not appear as a consistent predictor may be due to the distribution of the language variables. By the criteria listed above, roughly 6-7% of these populations are English monolingual, 3-5% are Spanish monolingual, and the vast majority (87-90%) are bilingual. Though this distribution may make it difficult to identify any effects of language type, it is consistent with other studies (Skrabanek, 1970; Nielsen and Fernandez, 1981) that show somewhat similar distributions, albeit not as small at the monolingual extremes. It is worth noting that the one language effect for Mexican Americans (i.e., the negative effect of Spanish monolingualism in the population under 18 years of age) is not in conflict with those studies that show positive language effects (Fernandez, 1982; Peal and Lambert, 1962) since these studies compare <u>bilinguals</u> with English monolinguals.

REFERENCES

Aguirre, Adalberto. 1979. Intelligence testing and Chicanos: A quality of life issue. Social Problems, 27, no. 2 (Dec.), 186-195.

Alexander, Karl, and Martha Cook. 1979. The motivational relevance of education plans: Questioning the conventional wisdom. Social Psychology Quarterly, 42, no. 3, 202-213.

Alexander, Karl, and B. K. Eckland. 1974. Sex differences in the educational attainment process. American Sociological Review, 39, 668-682.

Armor, David. 1972. School and family effects and black and white achievement: A reexamination of the USOE data. In F. Mosteller and D. P. Moynihan, eds., On equality of educational opportunity. New York: Vintage Books.

Ashford, J., and R. Snowden. 1970. Multivariate probit analysis. Biometrics, 26, 535-546.

Baral, David. 1979. Academic achievement of recent immigrants from Mexico. NABE Journal, 3, 1-13.

Bidwell, Charles, and J. Kasarda. 1975. School district organization and student achievement. American Sociological Review, 40, (February), 55-70.

Blau, Peter, and O. D. Duncan. 1967. The American occupational structure. New York: John Wiley.

Bloom, Benjamin, Allison Davis, and Robert Hess. 1965. Compensatory education for cultural deprivation. New York: Holt, Rinehart, and Winston.

Carter, Thomas. 1970. Mexican Americans in school: A history of educational neglect. New York: College Entrance Examination Board.

Carter, Thomas, and Robert Segura. 1979. Mexican Americans in school: A decade of change. New York: College Entrance Examination Board.

Chiswick, Barry. 1978. The effect of Americanization on the earnings of foreign-born men. Journal of Political Economy, 86, 897-921.

Coleman, James S., et al. 1966. Equality of educational opportunity. Washington, D.C.: U.S. Department of Health, Education, and Welfare.

Coleman, James S., Thomas Hoffer, and Sally Kilgore. 1981. Public and private schools. Report to the National Center for Education Statistics. University of Chicago. Mimeo.

Cordasco, Francesco. 1978. The bilingual-bicultural child and the question of intelligence. New York: Arno Press.

Cummins, Jim. 1977. Viewpoint: Psycholinguistic evidence. In Center for Applied Linguistics, Bilingual education: Current perspectives; Vol 4: Education. Arlington, Va.: Center for Applied Linguistics.

Cummins, Jim. 1981. Empirical and theoretical underpinnings of bilingual education. Journal of Education, 163, 16-29.

DeBlassie, Richard, and Gary Healey. 1970. Self-concept: A comparison of Spanish-American, Negro, and Anglo adolescents across ethnic, sex, and socioeconomic variables. Las Cruces, N.M.: New Mexico State University.

Duncan, Beverly. 1965. Dropouts and the unemployed. Journal of Political Economy, 73, 121-134.

Duncan, O. D., David L. Featherman, and Beverly Duncan. 1972. Socioeconomic background and achievement. New York: Seminar Press.

Edwards, Linda. 1976. School retention of teenagers over the business cycle. Journal of Human Resources, 11, no. 2 (Spring), 1-13.

Featherman, David L., and Robert M. Hauser. 1978. Opportunity and change. New York: Academic Press.

Fernandez, Roberto M. 1982. Bilinguals and scholastic achievement: Some baseline results. Paper to be presented at the American Sociological Association meetings, San Francisco.

Fligstein, Neil, and Roberto M. Fernandez. 1982. The causes of Hispanic educational attainment: History, patterns, and analyses. Report to the National Commission on Employment Policy. Mimeo.

Garcia, Steve. 1980. Language usage and the status attainment of Chicano males. Center for Demography and Ecology, Working Paper no. 80-2, University of Wisconsin-Madison.

Gordon, Edmund, and Doxey Wilkerson. 1966. Compensatory education for the disadvantaged. New York: College Entrance Examination Board.

Grebler, Leo, Joan Moore, and Ralph Guzman. 1970. The Mexican American people. New York: Free Press.

Haro, Carlos. 1977. Introduction [to a special issue], Aztlan, 8, 1-10.

Hauser, Robert M. 1971. Socioeconomic background and educational performance. Washington, D.C.: American Sociological Association.

Hauser, Robert M., William H. Sewell, and D. F. Alwin. 1976. High school effects on achievement. In W. H. Sewell, R. M. Hauser, and D. L. Featherman, eds., Schooling and achievement in American society. New York: Academic Press.

Heckman, James J. 1979. Sample selection bias as a specification error. Econometrica, 47, 153-162.

Heller, Celia. 1966. Mexican-American youth: Forgotten youth at the cross-roads. New York: Random House.

Jaffe, A. J., Ruth Cullen, and Thomas Boswell. 1980. The changing demography of Spanish Americans. New York: Academic Press.

Jencks, Christopher, et al. 1972. Inequality. New York: Basic Books.

Jencks, Christopher, and Marsha Brown. 1975. Effects of high schools on their students. Harvard Educational Review, 45, 273-324.

Jensen, Arthur. 1961. Learning abilities of Mexican-American and Anglo-American children. California Journal of Educational Research, 12, no. 4, 147-159.

Jensen, Arthur. 1980. Bias in mental testing. New York: Free Press.

Kaufman, Maurice. 1968. Will instruction in reading Spanish affect ability in reading English? Journal of Reading, 17, 521-527.

Kimball, W. L. 1968. Parent and family influences on academic achievement among Mexican-American students. Ph.D. Diss., Department of Education, UCLA.

Lambert, W. 1975. Culture and language as factors in learning and education. In A. Wolfgang, ed., Education of immigrant students. Toronto: Ontario Institute for Studies in Education.

Laosa, Luis. 1977. Inequality in the classroom: Observational research on teacher-student interactions, Aztlan, 8, 51-68.

Lewis, L. S., and R. Wanner. 1979. Private schooling and the status attainment process. Sociology of Education, 52 (April), 99-112.

Lewis, R., and N. St. John. 1974. Contributions of cross-racial friendship to minority group achievement in segregated classrooms. Sociometry, 37, no. 1, 79-91.

Lopez, David. 1976. The social consequences of Chicano home/school bilingualism. Social Problems, 24, 234-246.

Mare, Robert. 1980. Social background and school continuation decisions. Journal of the American Statistical Association, 75, 295-305.

Meier, Matt, and F. Rivera. 1972. The Chicanos: A history of Mexican Americans. New York: Hill and Wang.

Naboa, Abdin. 1980. Hispanics and desegregation: A summary of ASPIRA's study of Hispanic segregation trends in U.S. school districts. Metas, 1, no. 3 (Fall), 1-24.

National Center for Education Statistics. 1980. The condition of education for Hispanic Americans. Washington, D.C.: U.S. Government Printing Office.

Nielsen, François. 1980. Hispanic youth in U.S. schools: A design for analysis. Report to the National Center for Education Statistics. Mimeo.

Nielsen, François, and Roberto M. Fernandez. 1981. Achievement of Hispanic students in American high schools: Background characteristics and achievement. Report to the National Center for Education Statistics. Mimeo.

Olivas, Michael. 1980. The dilemma of access: Minorities in two-year colleges. Washington, D.C.: Howard University Press.

Otto, Luther, and Archibald Haller. 1979. Evidence for a social-psychological view of the status attainment process. Social Forces, 57, 887-914.

Patchen, Martin, G. Hoffman, and W. Brown. 1980. Academic performance of black high school students under different conditions of contact with white peers. Sociology of Education, 53 (January), 33-51.

Peal, E., and W. Lambert. 1962. The relation of bilingualism to intelligence. Psychological Monographs: General and Applied, 76, (27, no. 546), 1-23.

Ramirez, Manuel, and Alfredo Castaneda. 1974. Cultural democracy, bicognitive development, and education. New York: Academic Press.

Rumberger, R. 1981. Why kids drop out of high school. Paper presented at the meetings of the American Educational Research Association, Los Angeles.

Sewell, William H., Archibald Haller, and Alejandro Portes. 1969. The education and early occupational attainment process. American Sociological Review, 34, 82-92.

Sewell, William H., Archibald Haller, and M. A. Strauss. 1957. Social status and educational and occupational aspiration, American Sociological Review, 22, 67-73.

Sewell, William H., and Robert M. Hauser. 1975. Education, occupation, and earnings: Achievement in the early career. New York: Academic Press.

Sewell, William H., and V. P. Shah. 1968. Social class, parental encouragement, and educational aspirations. American Journal of Sociology, 73, 559-572.

Shea, Brent. 1976. Schooling and its antecedents: Substantive and methodological issues in the status attainment process. Review of Educational Research, 46, 463-526.

Skrabanek, R. L. 1970. Language maintenance among Mexican-Americans. International Journal of Comparative Sociology, 11, no. 4 (Dec.), 272-282.

Smith, Tom. 1980. Ethnic measurement and identification. Ethnicity, 7, 78-95.

Spady, W. G. 1976. The impact of school resources on students. In W. H. Sewell, R. M. Hauser, and D. L. Featherman, eds., Schooling and achievement in American society. New York: Academic Press.

Stinchcombe, Arthur L. 1964. Rebellion in a high school. Chicago: Aldine.

Theil, Henri. 1971. Principles of econometrics. New York: John Wiley.

Thornton, Clarence, and Bruce Eckland. 1980. High school contextual effects for black and white students: A research note. Sociology of Education, 53 (October), 247-252.

Tienda, Marta. 1982. Sex, ethnicity, and Chicano status attainment. International Migration Review, forthcoming.

U.S. Bureau of the Census. 1979. Persons of Spanish origin in the U.S.: March 1978. Population Characteristics, Series P-20, No. 339.

U.S. Commission on Civil Rights. 1967. Racial isolation in the public schools. 2 vols. Washington, D.C.: U.S. Government Printing Office.

U.S. Commission on Civil Rights. 1978. Social indicators of equality for minorities and women. Washington, D.C.: U.S. Government Printing Office.

Vasquez, Jo Ann. 1974. Will bilingual curricula solve the problem of the low achieving Mexican-American students? Bilingual Review, 1, 236-242.

Weinberg, Meyer. 1977a. A chance to learn. Cambridge: Cambridge University Press.

Weinberg, Meyer. 1977b. Minority students: A research appraisal. Washington, D.C.: U.S. Government Printing Office.

Wilson, Kenneth. 1979. The effects of integration and class on black education attainment. Sociology of Education, 52 (April), 84-98.